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## **Windows on Language Evolution**

**Abstract:** The paper explores the theme of the evolution of language. Three major theories are presented: Nativism, Neo-Darwinism and Windows Theory. The author summarises recent thought related to these the relevant presumptions and focuses on the 8 components of the "Windows" theory proposed by Rudolph Botha (2009).

**Keywords:** language evolution, Nativism, Neo-Darwinism, Windows Theory.

Charles Darwin published his book, *On the Origin of Species*, in 1858. It brought about widespread riposte which included researchers of language. Elucidations of the origin of language, some of which were quite extraordinary, were put forth. That made the French Academy of Sciences to ban all debates and publications on the origin of language in 1866. In 1911, the English Language and Linguistic Society introduced the same sanction. That gave a specific slant to research in the area of languages

If we follow the development of linguistics, we shall find an established continuity in object of study, underlying assumptions and research methods. Traditional linguistics deals with the product of language activity. It describes linguistic structures, their features, binding and distribution. Besides, it explores language use – pragmatics, discourse analysis, functional approaches. Cognitive linguistics, in turn, tries to establish the cognitive and psychological mechanisms of the use and interpretation of language.

In our day, we have reached a stage when we need to examine the genesis and evolution of language. At present, this has become the hottest and most disputed linguistic topic.

There are three approaches to the problem of the origin of language.

(1) Nativism (language is innate)

This is a thesis proposed and defended by Chomsky in all versions of his theory. It is supported by Pinker, Hauser, Fitch, Jackendoff, etc. A statement like that has two essential implications: there is no evolution of language and there are no differences among languages. Language has emerged catastrophically.

(2) Neo-Darwinism

This approach is in fact comparative. It was set up by Derek Bickerton who formulated his hypothesis in his book *Language and Species* in 1990. The comparison is with the communication systems of animals. Bickerton poses the question whether the more developed brain leads to the emergence of new language faculties or vice versa. Darwin believes that the skill of using language has brought about the development of the brain. But how has language emerged? Bickerton's reply is: in a one-off leap, a single crucial mutation.

In order to build his hypothesis, Bickerton compares animal and human systems of communication and points out some fundamental differences. According to him, the decisive element for the emergence of language is the use of symbols. Animal signs are indexes, not symbols. An index points directly to its referent. A symbol can replace its referent in displaced reference ("displacement"). It is this displaced reference that many scholars consider a specific human trait of language use. Besides, animal communication systems are primarily manipulative and secondarily informative by nature. The basic human function is communication and its realisation requires functional modification ("exaptation"), in other words, the use of symbols. If the

communicative function is the primary goal of human language, then new information is what matters. In animal communication, novelty would hamper communication.

Bickerton puts emphasis on another fact – the true difference between man and primates is not in the way they communicate but what they exchange.

Thus, Bickerton's theory seeks to answer questions about how, when and why the language faculty emerged.

### (3) The “Windows” Theory

This theory, offered by Rudolph Botha (2009), raises two basic questions, "What did the proto-language look like?" and "How did it evolve?" The hypothesis is definitely gradual or stadial because the emphasis is on the stages of evolution of language capacity as expressed by language structure. It can be related directly to the theory of content typology which also springs from the thesis of the gradual change in the evolution of language structure.

Unlike the first two study lines, Botha's Windows Approach is purely linguistic by nature. It focuses on the characteristic features of the proto-language and the stages of its evolution. The theory posits a set of specific "windows" on language evolution. The claim is that the proto-language and its evolution can be studied by analysing certain linguistic phenomena ("windows") about which there are direct evidences. The windows are linguistic systems with limited formal attributes and functions. They fall into three categories according to their information content.

- Correlative: data on external aspects of language evolution;
- Analogue: conclusions about the internal aspects, functions and structures of the proto-language;
- Abductive: data on properties of modern languages.

Which are the windows proposed by Botha?

## 1) Child language

This approach is based on the assumption that language is acquired by the young child in a process which is not isolated. Acquisition is integrated in other cognitive and socio-cognitive skills (comprehension of intentions, sharing of attention or the so called "solidary attention", pointing attention to the other, categorisation, model building). The child would recite the words he or she knows in order to show his knowledge of the code. This is a unique human intent. The young child wants to participate in the communicative process and demonstrated that in different ways. It will imitate adults' language in context.

Child speech has certain structural characteristics. It contains holophrases, i.e. the communicative intent is holistic and is expressed by a semantic and pragmatic package. The first words of the young child are used for asking or commenting on a given event. Both of these functions are missing in animal communication.

In initial communicative behaviour, the child uses some characteristic features of human verbal communication. For example, he or she applies the principle of background and figures in handling linguistic forms. Usually, long words are shortened but the part containing the stressed syllable is preserved: *munka* < *maimunka* ('little monkey'). Creativity is triggered in the practice of overgeneralisation.

## 2) Child-directed speech (motherese, caretaker speech, baby talk, etc.)

Despite the fact that the language referred to informally as "motherese" is not universal, it has certain general characteristics: it supports the formation of conceptual categories, upkeeps the matching of notion and form, transfers the rules of the target language. Its major function is to train the child to think about speaking ("thinking for speaking", a term introduced by Dan Slobin).

Child-directed speech has two specific features:

- Repetition of words or utterances with the intention of establishing shared attention;
- Attracting perceptive attention with regard to "here and now". The mother uses about 7000 utterances per day of which one third are questions and one quarter are imperatives.

### 3) Pidgin languages

Pidgins have rules which are proto-grammatical. They reflect cognitive natural (in other words, transparent) iconic units of form and meaning which are typical of pre-grammatical stage of language evolution. The latter are units of information which are linked conceptually and are used together; predictable information is left unexpressed.

Pidgins demonstrate the way languages with low grammatical complexity attain complexity by using the available means for new purposes:

- A new functional category appears by combining existing material in new ways;
- "Auxiliary" functions leading to the creation of grammatical forms crop up;
- New models and categories are created regardless of the resources of language.

### 4) Spontaneous second language acquisitions by adults

In the study of spontaneous, uninstructed adult second language acquisition, it has been found that speakers of different native languages develop a similar Basic Version of the target language. That version represents a linguistic organisation which is neutral with regard to linguistic features of a particular language. Grammar is elementary and relatively independent of the languages in contact. If there is a verb, it is used like a noun. That proves the so called "pre-verbal phase" of language evolution, e.g. German *Charlie eingang* (Charlie

entrance`)). The order of utterances follows the order of actions. There is no temporal word but the relation AFTER is expressed implicitly by the succession of the statements.

#### 5) Home sign systems

These are sign communicative systems developed spontaneously by deaf children of hearing parents. It has been found that such systems have similar characteristics across the world. This remarkable similarity seems to be caused by the high level of iconicity that deaf children need in order to be understood by their hearing interlocutors.

These systems are quite unique. They are the first language of deaf children in which any influence of another language is excluded. Therefore children like that invent the elements of their language at the word and utterance level. The system becomes more complex with age, with the cognitive development and the social integration of the individual.

#### 6) Agrammatical aphasia

Agrammatical aphasia (Broca's aphasia) is characterised by the preservation of the lexicon and the loss of grammar. That situation recreates the stage of the proto-language which has no developed grammar and the speaker has to get along by using only lexical means.

The six windows presented above are not the only ones. They all provide information on the nature of the proto-language:

- It is a language without syntax.
- It is distinguished by nonverbal phrases.
- The relations among elements of utterances are built on a pragmatic principle: Agent first – Focus last. This principle, formulated by Jackendoff, is valid for Pidgins, for spontaneous second language acquisition, home-grown sign systems and agrammatical aphasia.

- A big step in the evolution is the emergence of displaced reference (one of the defining features of language called "design features" by Hockett, 1960). Displaced reference allows a function which is missing in animal communication – lying.
- The critical qualitative stage in evolution is the transition from holophrases to proto-grammar and poly-propositional discourse.
- The dominant postulate in the theory of evolution is the emergence of the lexical component before the syntactic one. The same postulate is underlying content typology.
- In the proto-language, language elements can be combined for the first time. Animal cries do not mean anything more if they are combined.

The windows on language evolution do not show us the way grammatical categories are created but they demonstrate the way "complex functions" are expressed by "simple means".

In connection with the emergence of grammatical categories, two new "windows" have been offered of late (windows 7 and 8).

#### 7) Theory of grammaticalisation

The theory of grammaticalisation, developed by Heine and Kuteva (2007), as a matter of fact describes what happens in the evolution of the proto-language. However, the analysis is not of the proto-language itself. What happens in the evolution is formulated in five questions supplemented with convincing evidences:

- Were the elements of the proto-language motivated or arbitrary? The answer is, arbitrary.
- Was language evolution sudden or gradual? The answer is, gradual.
- Which is older or primary – lexicon or grammar? The answer is, the lexicon.

- What was the structure of proto-language? The theory of grammaticalisation does not aim to give an answer to this question but brings up the windows on evolution.
- How has language structure evolved since its genesis to present? The answer is worked out in detail in the theory of grammaticalisation and content typology.

#### 8) Diachronic content typology

Diachronic content typology describes how proto-language looks and what happens at every stage of language evolution.

Windows 7 and 8 work in a way which is different from the other six ones. It bears on reconstruction and evolutionary retrospection. The latter is based on the hypothesis of uniformitarianism.

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